

IN THE CLAIMS

Please cancel claims 6 through 9 and 16 through 29.

Please add the following new claims.

-- 30. A recombinant plasmid wherein a DNA which codes
~~at least~~ for the amino acid sequence:

t220X Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser
Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg
Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg
Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu
Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile
Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser
Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val
Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu
Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys
Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser
His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr
Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn

is inserted in a vector DNA.

31.4 The recombinant plasmid according to claim 30
wherein said inserted DNA comprises ~~at least~~ the following base pair sequence:

1230X ATG ACC AAC AAG TGT CTC CTC CAA ATT GCT CTC CTG TTG TGC TTC TCC
TAC TGG TTG TTC ACA GAG GAG GTT TAA CGA GAG GAC AAC ACG AAG AGG

E ACT ACA GCT CTT TCC ATG AGC TAC AAC TTG CTT GGA TTC CTA CAA AGA
TGA TGT CGA GAA AGG TAC TCG ATG TTG AAC GAA CCT AAG ~~CAT~~ GTT TCT
AGC AGC AAT TTT CAG TGT CAG AAG CTC CTG TGG CAA TTG AAT GGG AGG
TCG TCG TTA AAA GTC ACA GTC TTC GAG GAC ACC GTT AAC TTA CCC TCC
CTT GAA TAT TGC CTC AAG GAC AGG ATG AAC TTT GAC ATC CCT GAG GAG
GAA CTT ATA ACG GAG TTC CTG TCC TAC TTG AAA CTG TAG GGA CTC CTC
ATT AAG CAG CTG CAG CAG TTC CAG AAG GAG GAC GCC GCA TTG ACC ATC
TAA TTC GTC GAC GTC AAG GTC TTC CTC CTG CGG CGT AAC TGG TAG
TAT GAG ATG CTC CAG AAC ATC TTT GCT ATT TTC AGA CAA GAT TCA TCT
ATA CTC TAC GAG GTC TTG TAG AAA CGA TAA AAG TCT GTT CTA AGT AGA
AGC ACT GGC TGG AAT GAG ACT ATT GTT GAG AAC CTC CTG GCT AAT GTC
TCG TGA CCG ACC TTA CTC TGA TAA CAA CTC TTG GAG GAC CGA TTA CAG
TAT CAT CAG ATA AAC CAT CTG AAG ACA GTC CTG GAA GAA AAA CTG GAG
ATA GTA GTC TAT TTG GTA GAC TTC TGT CAG GAC CTT CTT TTT GAC CTC
AAA GAA GAT TTC ACC AGG GGA AAA CTC ATG AGC AGT CTG CAC CTG AAA
TTT CTT CTA AAG TGG TCC CCT TTT GAG TAC TCG TCA GAC GTG GAC TTT
AGA TAT TAT GGG AGG ATT CTG CAT TAC CTG AAG GCC AAG GAG TAC AGT
TCT ATA ATA CCC TCC TAA GAC GTA ATG GAC TTC CGG TTC CTC ATG TCA
CAC TGT GCC TGG ACC ATA GTC AGA GTG GAA ATC CTA AGG AAC TTT TAC
GTG ACA CGG ACC TGG TAT CAG TCT CAC CTT TAG GAT TCC TTG AAA ATG
TTC ATT AAC AGA CTT ACA GGT TAC CTC CGA AAC
AAG TAA TTG TCT GAA TGT CCA ATG GAG GCT TTG.

32/9

32 A recombinant plasmid wherein a DNA which codes ~~at~~
~~least~~ for the amino acid sequence:

~~T24bX~~ Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser ~~Asn~~ His Cys Ala Trp Thr
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
Thr Gly Tyr Leu Arg Asn

(B)
cont.)

C

is inserted in a vector DNA.

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2 33. The recombinant plasmid according to claim *32* wherein
C said inserted DNA comprises ~~at least~~ the following base pair sequence:

T250X

ATG AGC TAC AAC TTG CTT GGA TTC CTA CAA AGA AGC AGC AAT TTT CAG
TAC TCG ATG TTG AAC GAA CCT AAG GAT GTT TCT TCG TCG TTA AAA GTC
AAG GAC AGG ATG AAC TTT GAC ATC CCT GAG GAG ATT AAG CAG CTG CAG
TTC CTG TCC TAC TTG AAA CTG TAG GGA CTC CTC TAA TTC GTC GAC GTC
CAG TTC CAG AAG GAG GAC GCC GCA TTG ACC ATC TAT GAG ATG CTC CAG
GTC AAG GTC TTC CTC CTG CGG CGT AAC TGG TAG ATA CTC TAC GAG GTC
AAC ATC TTT GCT ATT TTC AGA CAA GAT TCA TCT AGC ACT GGC TGG AAT
TTG TAG AAA CGA TAA AAG TCT GTT CTA AGT AGA TCG TGA CCG ACC TTA
GAG ACT ATT GTT GAG AAC CTC CTG GCT AAT GTC TAT CAT CAG ATA AAC
CTC TGA TAA CAA CTC TTG GAG GAC CGA TTA CAG ATA GTA GTC TAT TTG
CAT CTG AAG ACA GTC CTG GAA GAA AAA CTG GAG AAA GAA GAT TTC ACC
GTA GAC TTC TGT CAG GAC CTT CTT TTT GAC CTC TTT CTT CTA AAG TGG
AGG GGA AAA CTC ATG AGC AGT CTG CAC CTG AAA AGA TAT TAT GGG AGG
TCC CCT TTT GAG TAC TCG TCA GAC GTG GAC TTT TCT ATA ATA CCC TCC
ATT CTG CAT TAC CTG AAG GCC AAG GAG TAC AGT CAC TGT GCC TGG ACC
TAA GAC GTA ATG GAC TTC CGG TTC CTC ATG TCA GTG ACA CGG ACC TGG
ATA GTC AGA GTG GAA ATC CTA AGG AAC TTT TAC TTC ATT AAC AGA CTT
TAT CAG TCT CAC CTT TAG GAT TCC TTG AAA ATG AAG TAA TTG TCT GAA
ACA GGT TAC CTC CGA AAC
TGT CCA ATG GAG GCT TTG *A*

(cont)

34.5 34. The recombinant plasmid according to claim *30* wherein
C said vector DNA is an Escherichia coli plasmid.

35.3 35. The recombinant plasmid according to claim *32* wherein
C said vector DNA is an Escherichia coli plasmid.

36. The recombinant plasmid according to claim ~~34~~³⁵ wherein said Escherichia coli plasmid is selected from the group consisting of pBR 322, pCRL^{and} pMB9 and pSC1.

37. ¹⁴ The recombinant plasmid according to claim ~~35~~³⁵ wherein said Escherichia coli plasmid is selected from the group consisting of pBR322, pCRL^{and} pMB9 and pSC1.

38. ¹⁵ A process for preparing a recombinant plasmid which comprises inserting a synthesized double stranded DNA which codes for ~~at least~~ the amino acid sequence:

~~T260X~~ Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser
Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg
Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg
Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu
Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile
Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser
Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val
Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu
Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys
Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser
His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr
Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn

in a vector DNA.

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39. A process for preparing a recombinant plasmid which comprises inserting a synthesized double stranded DNA which codes for ~~at least~~ the amino acid sequence:

Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln
Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu
Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln
Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln
Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn
Glu Thr Ile Val Glu Asn Leu Leu Asn Val Tyr His Gln Ile Asn
His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr
Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg
Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser Ais Cys Ala Trp Thr
Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu
Thr Gly Tyr Leu Arg Asn

in a vector DNA.

40.16

The process according to claim 38 wherein said vector DNA is an Escherichia coli plasmid.

41.19

The process according to claim 39¹⁸ wherein said vector DNA is an Escherichia coli plasmid.

42.17

A process according to claim 40¹⁶ wherein said Escherichia coli plasmid is selected from the group consisting of pBR322, pCR1^{and} pMB9^{and} pSC1.

²⁰
43. A process according to claim ¹⁹ ~~41~~ wherein said *Escherichia coli* plasmid is selected from the group consisting of pBR322, pCR1 ^{and} pMB9 ~~and~~ pSC1.

²¹
44. A process for producing a microorganism capable of expression of a polypeptide with interferon activity which comprises transforming a host microorganism with a replicable recombinant plasmid containing a foreign DNA which codes ~~at least~~ for the amino acid sequence:

^{7280X}
Met Thr Asn Lys Cys Leu Leu Gln Ile Ala Leu Leu Leu Cys Phe Ser
Thr Thr Ala Leu Ser Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg
Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg
Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu
Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile
Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser
Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val
Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu
Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys
Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser
His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr
Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn.

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45. A process for producing a microorganism capable of expression of a polypeptide with interferon activity which comprises transforming a host microorganism with a replicable recombinant plasmid containing a foreign DNA which codes at least for the amino acid sequence:

T290X
Met Ser Tyr Asn Leu Leu Gly Phe Leu Gln Arg Ser Ser Asn Phe Gln Cys Gln Lys Leu Leu Trp Gln Leu Asn Gly Arg Leu Glu Tyr Cys Leu Lys Asp Arg Met Asn Phe Asp Ile Pro Glu Glu Ile Lys Gln Leu Gln Gln Phe Gln Lys Glu Asp Ala Ala Leu Thr Ile Tyr Glu Met Leu Gln Asn Ile Phe Ala Ile Phe Arg Gln Asp Ser Ser Ser Thr Gly Trp Asn Glu Thr Ile Val Glu Asn Leu Leu Ala Asn Val Tyr His Gln Ile Asn His Leu Lys Thr Val Leu Glu Glu Lys Leu Glu Lys Glu Asp Phe Thr Arg Gly Lys Leu Met Ser Ser Leu His Leu Lys Arg Tyr Tyr Gly Arg Ile Leu His Tyr Leu Lys Ala Lys Glu Tyr Ser ~~Asn~~ His Cys Ala Trp Thr Ile Val Arg Val Glu Ile Leu Arg Asn Phe Tyr Phe Ile Asn Arg Leu Thr Gly Tyr Leu Arg Asn.

(Continued)

46.22
46. A process according to claim *44.21* wherein said host microorganism is Escherichia coli $\chi 1776$.

47.25
47. A process according to claim *45.24* wherein said host microorganism is Escherichia coli $\chi 1776$.

48.23
48. A process according to claim *44.21* wherein said recombinant plasmid is TpIF 319-13. --

Claim 11, line 2, change "6" to -- 30 --.

Claim 12, line 2, change "7" to -- 32 --.